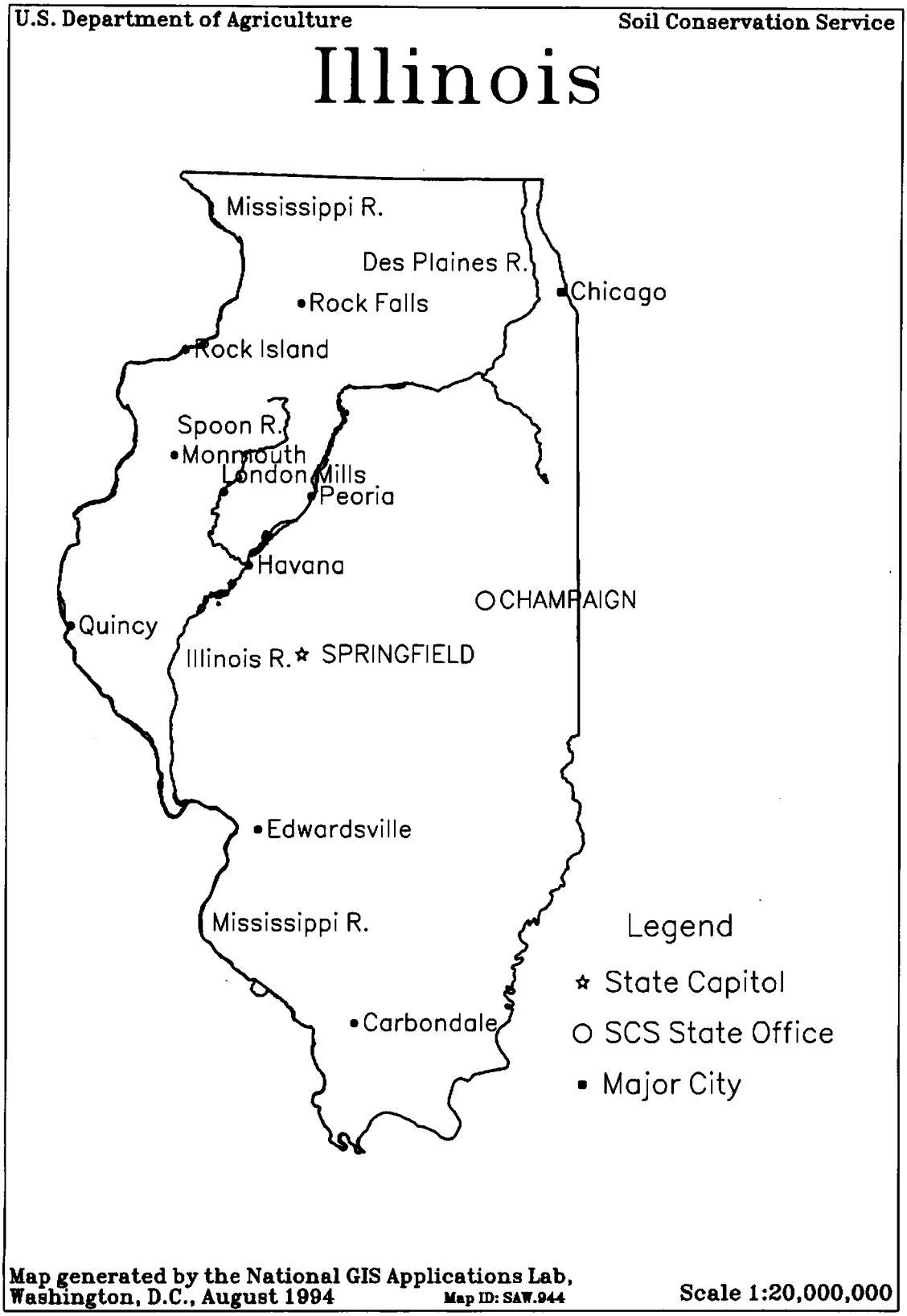
Illinois

A representative of the Office of the Governor summed up flood damages in Illinois to the United State Congress:

> The great flood of 1993 represents the worse disaster in Illinois in the century--sixteen thousand citizens were forced out of their homes; 872,000 acres of


U.S. Department of Agriculture
Soil Conservation Service
Illinois
Mississippi R.
Des Plaines R.
Chicago
Rock Falls
Rock Island
Spoon R.
Monmouth
London Mills
Peoria
Havana
CHAMPAIGN
Quincy
Illinois R.
SPRINGFIELD
Edwardsville
Mississippi R.
Carbondale
Legend
State Capitol
SCS State Office
Major City
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Map ID: SAW.944
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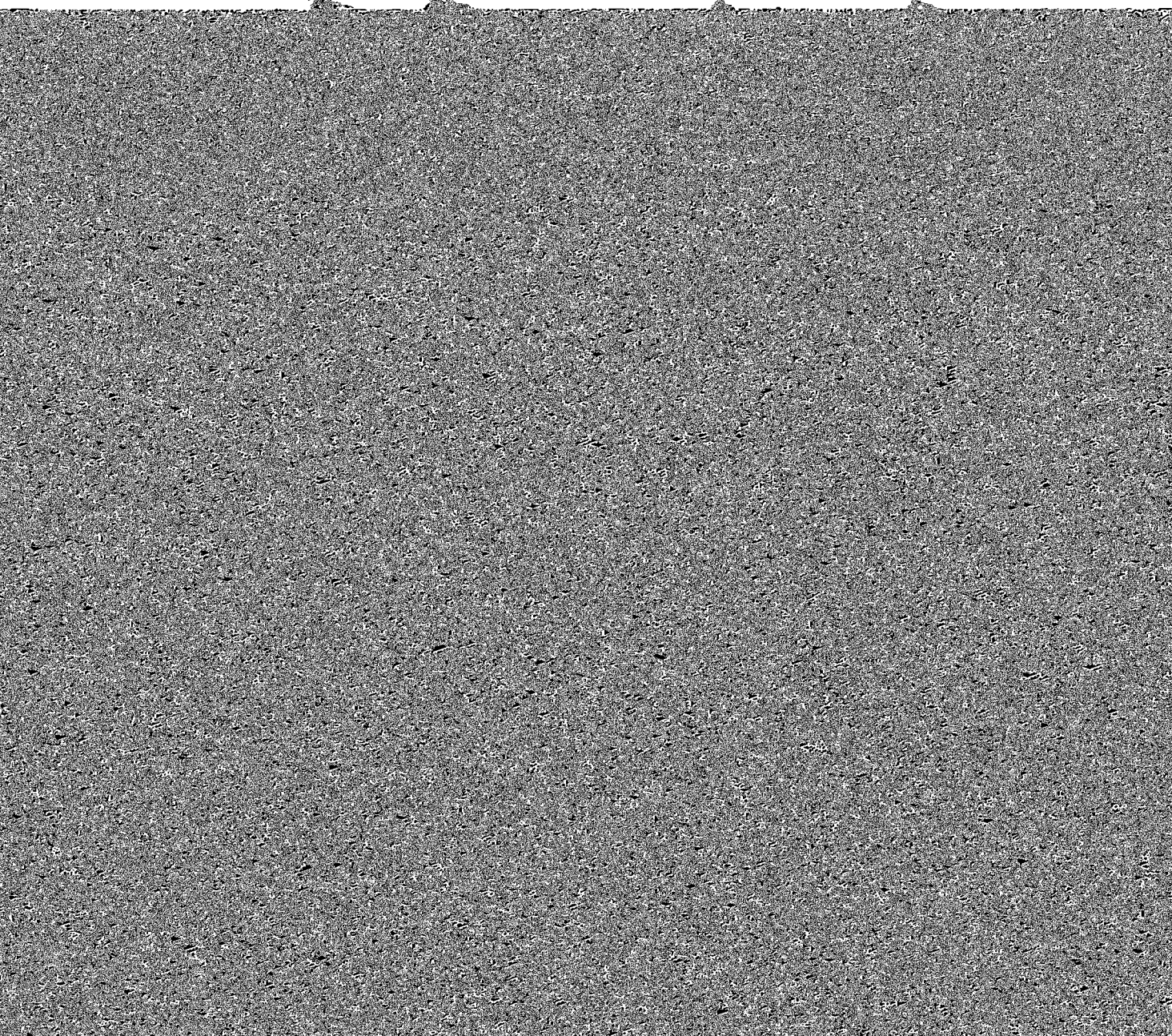
in mind, however, that these are statewide figures. The type of EWP work could vary a great deal within the state--for example, some counties along the Mississippi or between the Mississippi and Illinois rivers had no problems other than levee breaks.

Those hardest hit by the floods lived along the Mississippi River where water stayed high and delayed the Corps' mainline levee repairs. Most of the Service's flood recovery efforts, however, was completed by early 1994. Unlike some of the other flood states, the state staff in Champaign stated that they did not expect that their 1994 workload would be beyond their capabilities. They also did not plan to grant many variances to the conservation compliance provisions of the 1985 and 1990 farm bill. Assistant state conservationist Harry Slawter pointed out several reasons for this. First, while Iowa had excessive moisture in 1992 and 1993, Illinois faced this problem only in 1993. Illinois did not have the upland damage of Iowa or the sand deposits in the floodplain that



Canada played a key role in protecting the town of Havana, Illinois. Citizens did not face the threat of erosion caused by rainfall or flooding caused by a rising river, but rather from water percolating up through sandy soil outside of Havana, which had become saturated by the constant rain. The water threatened to flood the town. Stella Fedeniuk, an engineer from Canada's Prairie Farm Rehabilitation Administration, along with SCS staff and a local engineering firm, developed a plan to pump water about one mile from the sandy area to the Illinois River. One of the main barriers was finding enough pipe on short notice to move the water. After this was done, SCS permanently loaned the city the pumps and followed up with a more comprehensive watershed planning effort.[239]

Finally, EWP work was directed toward protecting important sources of income for communities. Many of those who enjoy Edgar Lee Masters' classic of American literature, *Spoon River Anthology,* have made a pilgrimage to the town of London Mills along that river.[240] Tourist income from the site was threatened by streambank erosion. SCS moved quickly to use rock fill and rip-rap along about three hundred feet of the river to protect the town's infrastructure and economic well-being.

The experience of Illinois provided one example of how SCS dealt with cultural resource and environmental issues in its EWP work. Technically, neither the environmental nor the cultural resource impact statements were required for each EWP job, since a program-wide Environmental Impact Statement (EIS) had already been completed by SCS. Several states, however, developed programmatic checklists in order to focus

Illinois had no full-time cultural resource specialist or archaeologist on staff; rather these duties were handled by William Lewis, Jr., an agricultural economist. The environmental impact statement which accompanied every DSR, however, included a short section on cultural resources. These were reviewed by an archaeologist from the U. S. Forest Service in southern Illinois, Mary R. McCorvie.[242] In light of the emergency nature of the repair work, decisions had to be made quickly. Review of sites was prioritized based upon the expected start dates for EWP work. The archaeologist then visited the twenty-seven sites that seemed most likely to have an impact upon cultural resources. The report prepared by the archaeologist stated that no sites were harmed by the Service's EWP work. Eventually, the state historical preservation officer (SHPO) sent letters to the SCS state office in Champaign, confirming that no cultural resources were disturbed by the emergency repair work.

One particular site where SCS helped protect an important historical resource was at Fort De Chartes, a park managed by the Illinois Historical Preservation Agency. The fort is listed in the National Register of Historic Places because it served as a center of French influence in the region from the 1720's until surrendered to the English in 1765. Floodwaters cut a large gully eight feet deep and over one thousand feet long through the park. As the Corps rebuilt a nearby levee, SCS contracted to repair erosion damage around the walls and buildings at this site. The Service took special care to assure that borrow, fill material used in the repair, taken from a nearby site did not disturb any local cultural resources.

Perhaps more than any other state, the SCS staff in Illinois directly connected data they

SCS employees brought together a wide variety of organizations and technology. For example, at the request of a congressman, SCS's Resources Inventory and Geographic Information System Division (RIGIS) created a series of hydric soils maps of Illinois.[243] These maps utilized an AVHRR satellite image from June and July of 1993. The images were compared in order to indicate the areas of flooding. This was then combined with the USDA-SCS State Soil Geographic database. As a result, a map was produced which indicated soils which were sixty percent or less hydric, sixty-one percent to eighty percent hydric, or greater than eighty-one percent hydric. Finally, the Service developed a list of total acres flooded and acres of hydric soils flooded for each county in the state. Such materials helped locate concentrations of wetlands.

Although the wetlands program proved popular in neighboring Iowa and Missouri, in Illinois there was little interest among landowners. Perhaps the most important reason for this was the higher land values, especially in the fertile Mississippi River floodplain, which made the $800 per acre offer for a permanent easement too low.[244] Harry Slawter provided some other reasons that only about one thousand acres were offered in the first EWRP sign-up. First, some farmers wanted to sell title to all their land, not just the easement, then retire and move away from the area. Second, Illinois had less cropland inundated than Iowa or Missouri (the two states with the greatest interest in WRP and EWRP). Third, the area inundated, the Mississippi floodplain, was behind levees which the Corps was repairing. Fourth, Illinois was not in the original WRP pilot program. As was the case with the pilot program in other states, in their first experience with wetlands easements, landowners were at times unrealistic in their expectations of what lands would be eligible and how much they could get for that land.

As was the case with the lack of interest in EWRP, the success or failure of SCS policies was often at the mercy of outside forces. For example, the Service was at times drawn into local disputes over which it had little control. One controversial incident occurred near Peoria, Illinois. SCS became caught up in a labor dispute as unions picketed an out-of-state non-union contractor performing two EWP jobs.[245] There was vandalism and at least one fight. Union members alleged that the contractor was paying illegal wages, that is, not paying the rates mandated by the Bacon-Davis Act. In the end, there was no evidence of impropriety. The incident was forgotten quickly as the firm is no

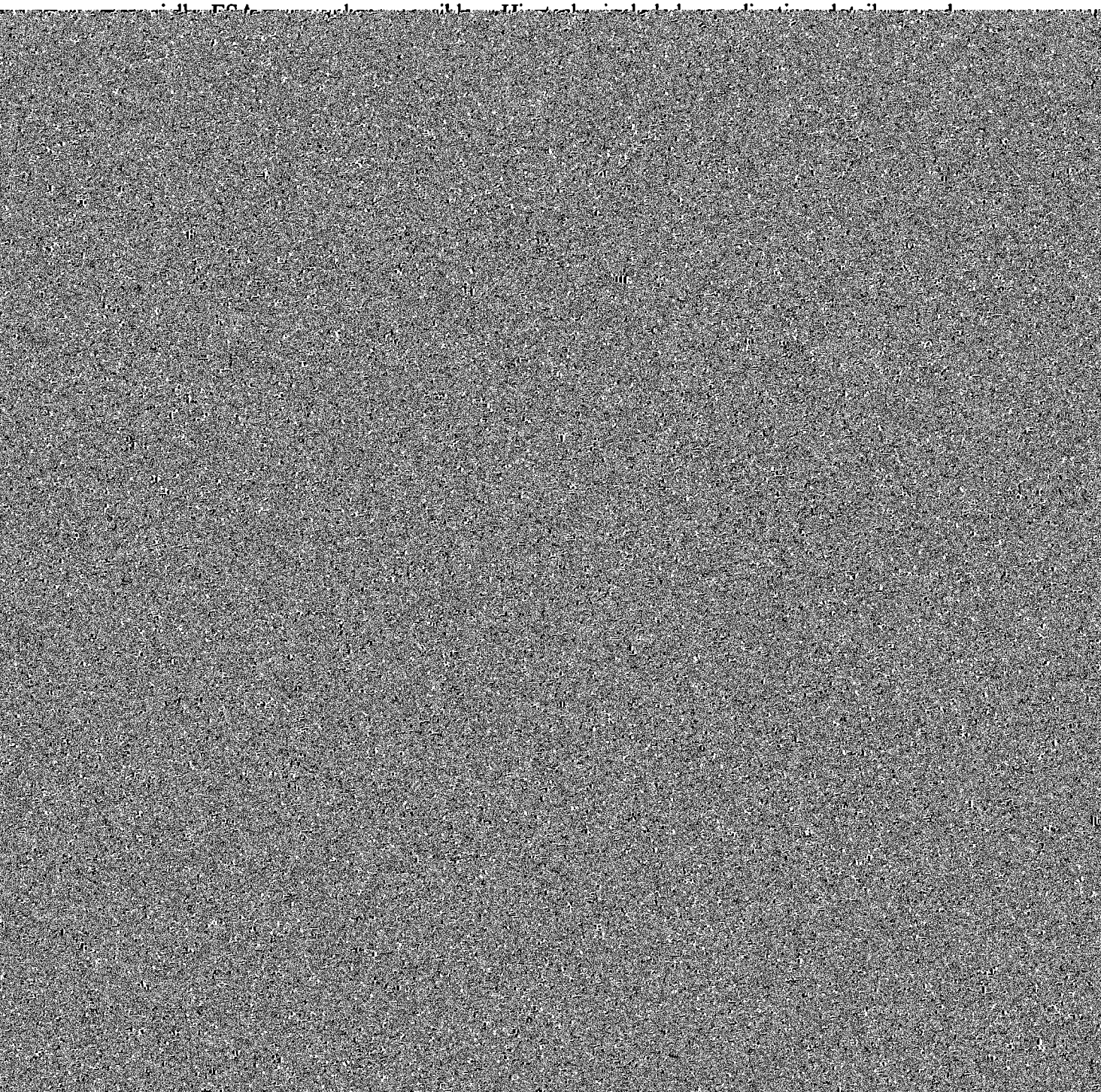
[243] Hydric soils are defined as soils "which are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions on the upper part." The soils are one key criteria for wetlands determinations. The other two are the presence of standing water and certain plants.

[244] This value was set by a committee made up of SCS, FWS, Extension Service, ASCS, FmHA, the Rural Appraisers, Farm Bureau, and the state Department of Agriculture.

[245] Actually, only about ten percent of the contracts went to out-of-state firms. These contracts, however, were usually larger than average.

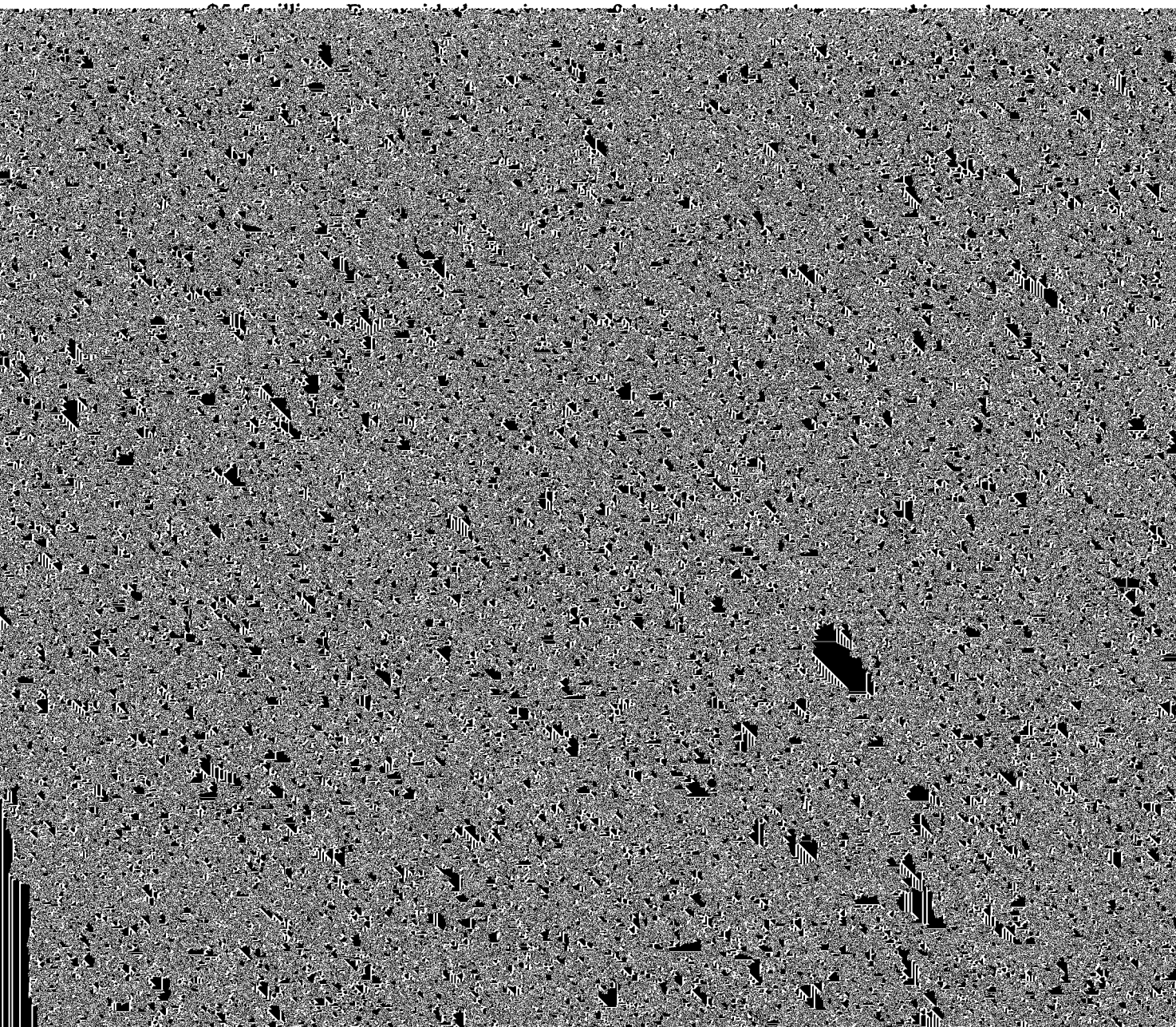
longer in the area. Given the fact that the picketed contractor had submitted the lowest bid, there was relatively little SCS could do to reject it without evidence of incompetence or wrong-doing.

Area conservationists (AC) played an important role in the EWP program. One good example of their work can be seen in the efforts of Richard Macho, an AC in Edwardsville, Illinois. He defined his role first as "logistics," that is, helping the head of the local emergency response office set up and begin flood recovery work. His goal was to free the hands of the EWP manager while remaining focused on his regular work,



because it built close ties with rural America. SCS's experience was contrasted with that of FEMA and the Corps, which were sometimes accused of lacking an understanding of and rapport with small towns and farmers.[248]

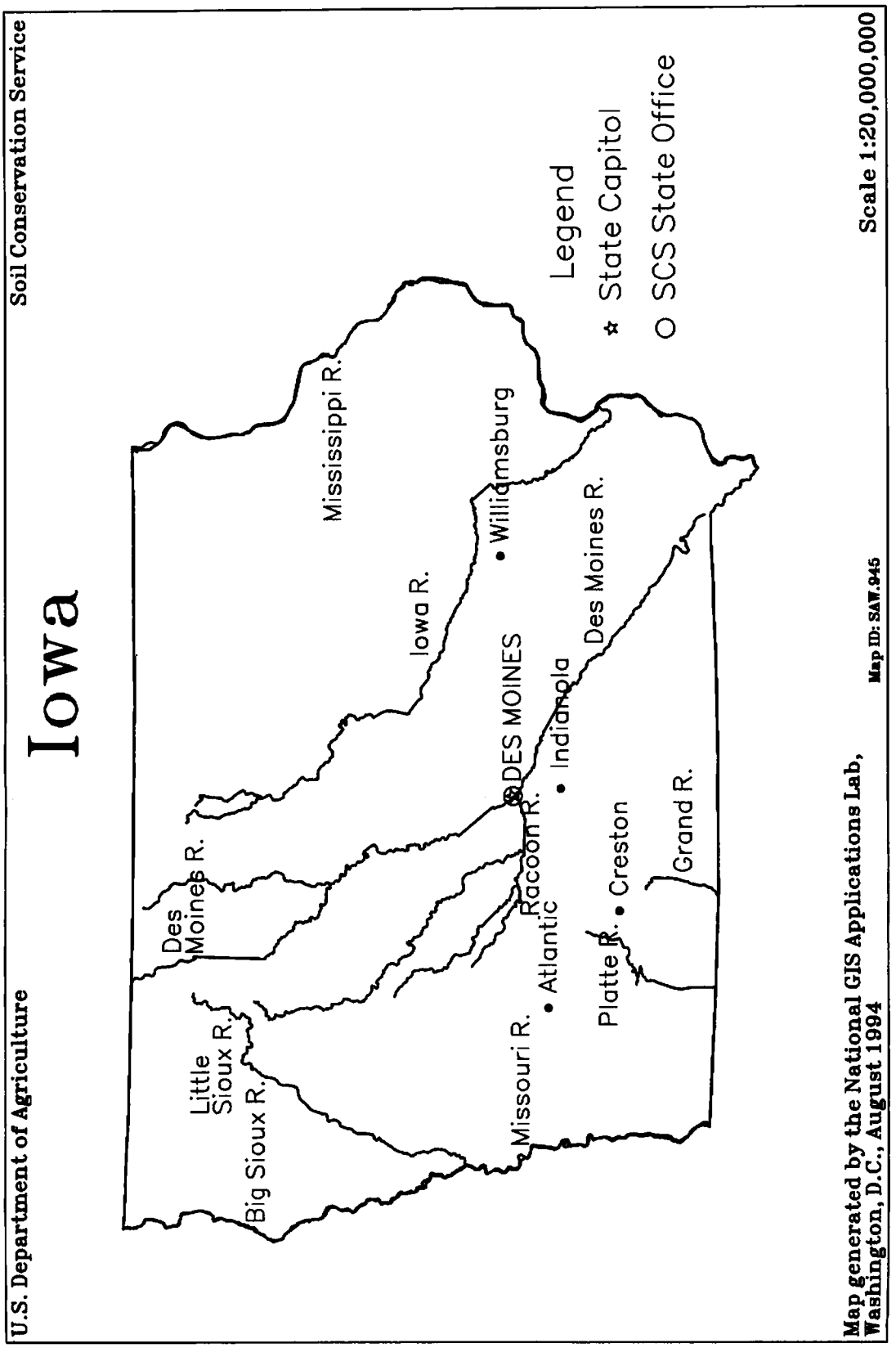
Unfortunately, 1993 was only the beginning of the flood disaster and EWP recovery work in Illinois. While attracting relatively little notice outside the areas directly affected, heavy rains in April of 1994 led to eleven Illinois counties receiving disaster declarations. The counties included some that had been devastated in 1993. Because the ground was already saturated and many structures had been weakened by the event of 1993, damage was heavy. SCS responded by re-opening an emergency office in Edwardsville, which is located directly east of St. Louis. One hundred and eighty-one applications for assistance were received; 125 for erosion control, thirty for debris removal from channels, and twelve for levee repair. The estimated cost of these repairs



up on January 15, 1994, were done under a 80:20 cost-share arrangement. In March of 1994, the Iowa state office ordered that all future cost-sharing follow the new 75:25 split as mandated in the watershed manual.

By early July of 1994, contracting had been completed for 305 of 763 eligible projects.[252] Hundreds of repair requests were referred to agencies better able to respond. Sponsors included not only county governments, cities, and levee districts, but also the Iowa Department of Natural Resources and the Iowa Department of Transportation. The most common problem requiring SCS help was bank stabilization and erosion control work--about seventy percent of the total requests. Next came debris removal from water courses--about twenty percent of the requests.[253]

Levee repairs made up only about ten percent of the requests. As was the case in most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Indianola
Des Moines R.
Racoon R.
Atlantic
Creston
Grand R.
Platte R.
Missouri R.
Little Sioux R.
Big Sioux R.
Des Moines R.
Map generated by the National GIS Applications Lab, Washington, D.C., August 1994
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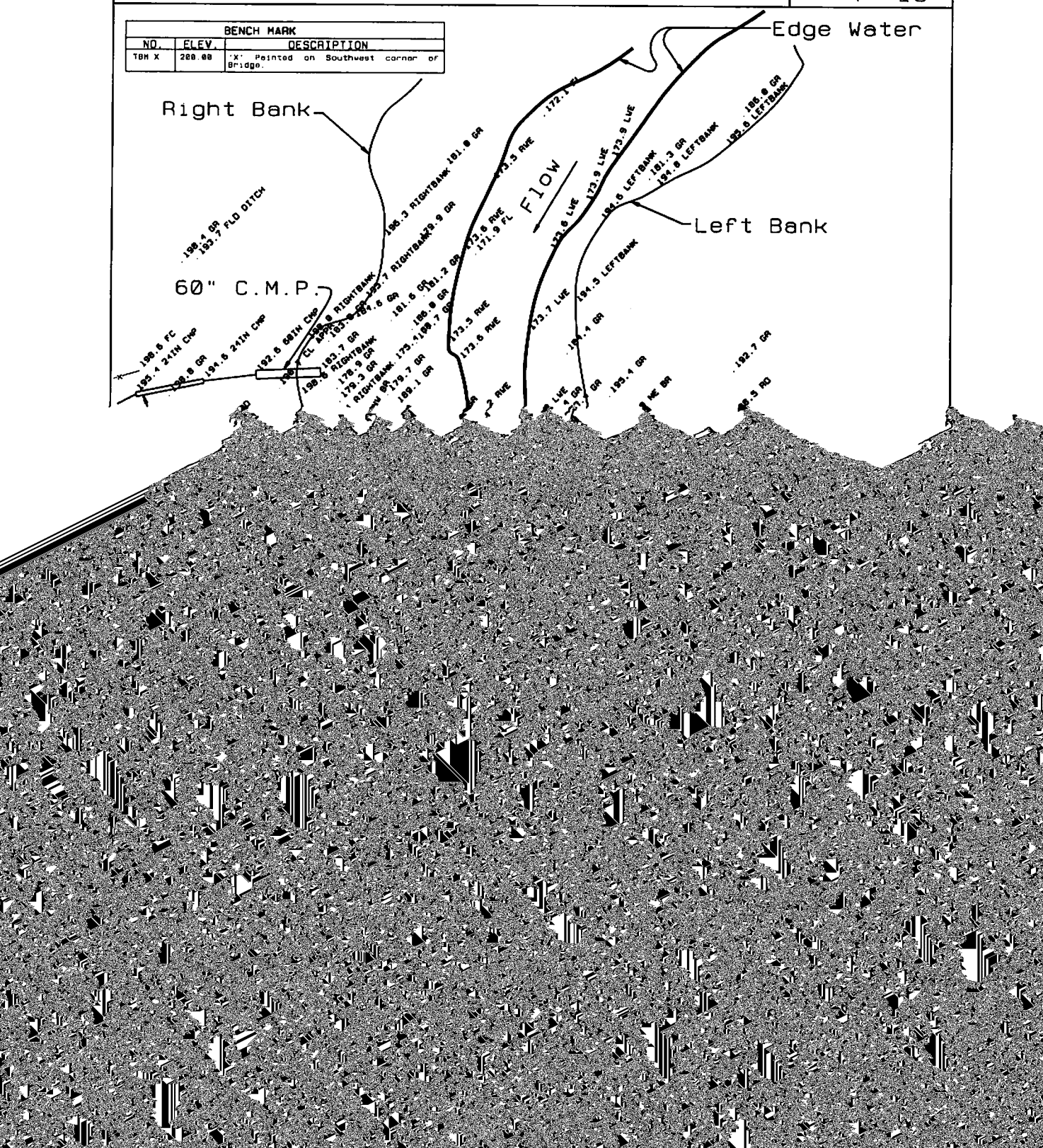
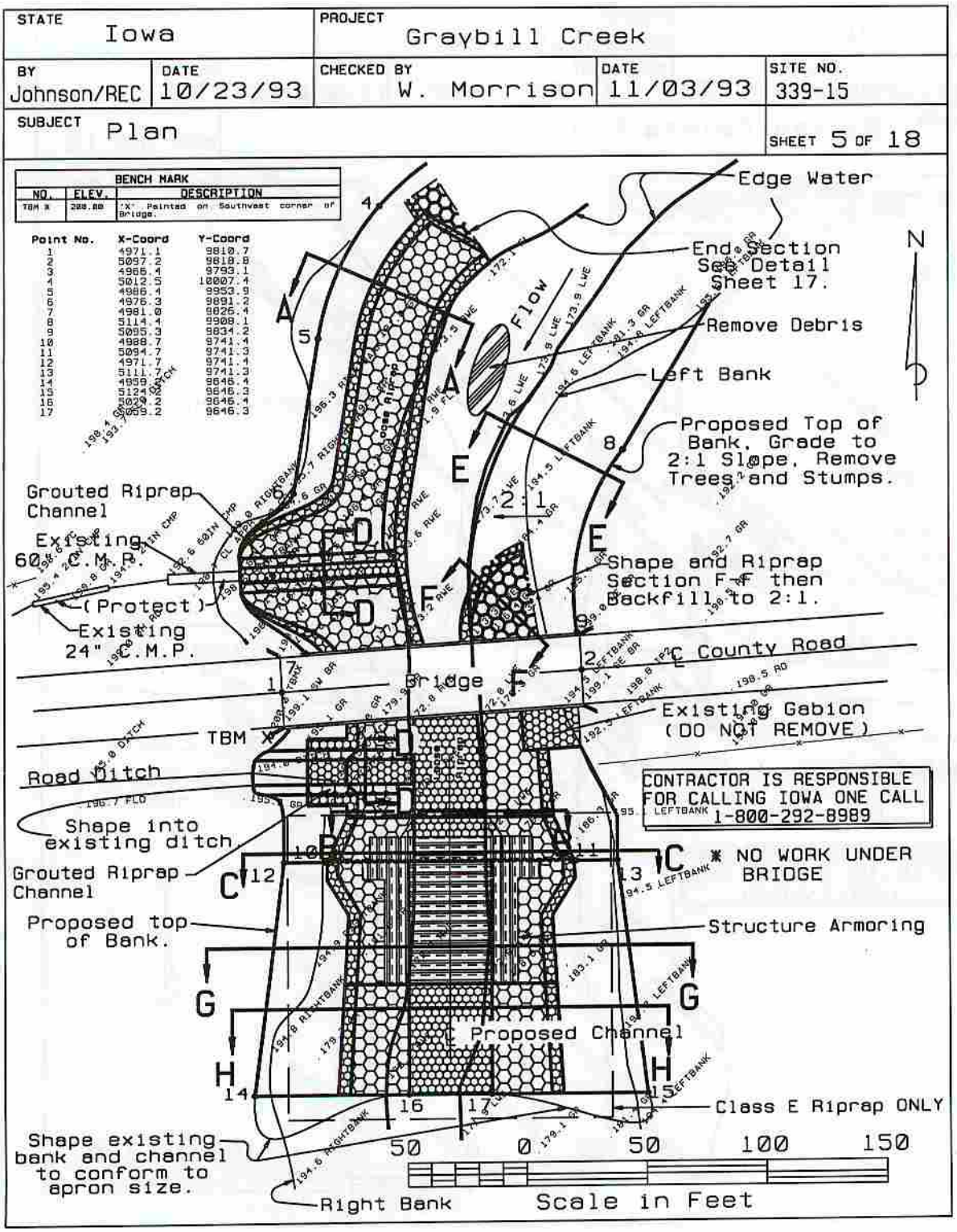
In order to keep pace with the great demand for engineering services, SCS relied upon computer-aided design (CAD). The engineering offices in Atlantic and Williamsburg, as well as the EWP Center in Indianola, all had trained staff on hand to use Versacad software. As a result, it became very easy to exchange, modify, and make consistent construction plans throughout the state. It also saved time by allowing engineering staff to select portions of previous designs and paste them into new projects. This capability was especially useful in some of the more complicated projects such as streambank and streambed stabilization around bridges.

In both the EWP efforts and more routine conservation work, perhaps no single job is as important in SCS as that of the district conservationists (DC). They are the employees who manage the field offices and work most closely with farmers and other landowners across the country. District conservationists have the most in-depth knowledge of local economic and environmental conditions, local media, and local politics. One individual, district conservationist Paul Goldsmith of Union County in south-central Iowa, illustrates the role of the DC in the EWP effort. He described his task as primarily that of a liaison between the county government and the EWP office in Indianola. His specific tasks included notifying the local newspapers about the emergency program, meeting with county government officials to help explain the program, checking damage sites, helping sponsors apply for assistance, and working with the county engineer on plans for repairs. The majority of the EWP work in Union County was to protect bridges and secondary roads. The county engineer provided the sponsor's portion of the cost-share payment through survey, administrative, and inspection services. In these cases, SCS's main role was to insure that the construction work met Service standards. Another important aspect of Goldsmith's work was ASCS's Emergency Conservation Program (ECP). The Service supplied technical assistance for over four hundred ECP jobs. ASCS, in turn, provided cost-sharing aid to landowners so that they could implement SCS's suggestions.

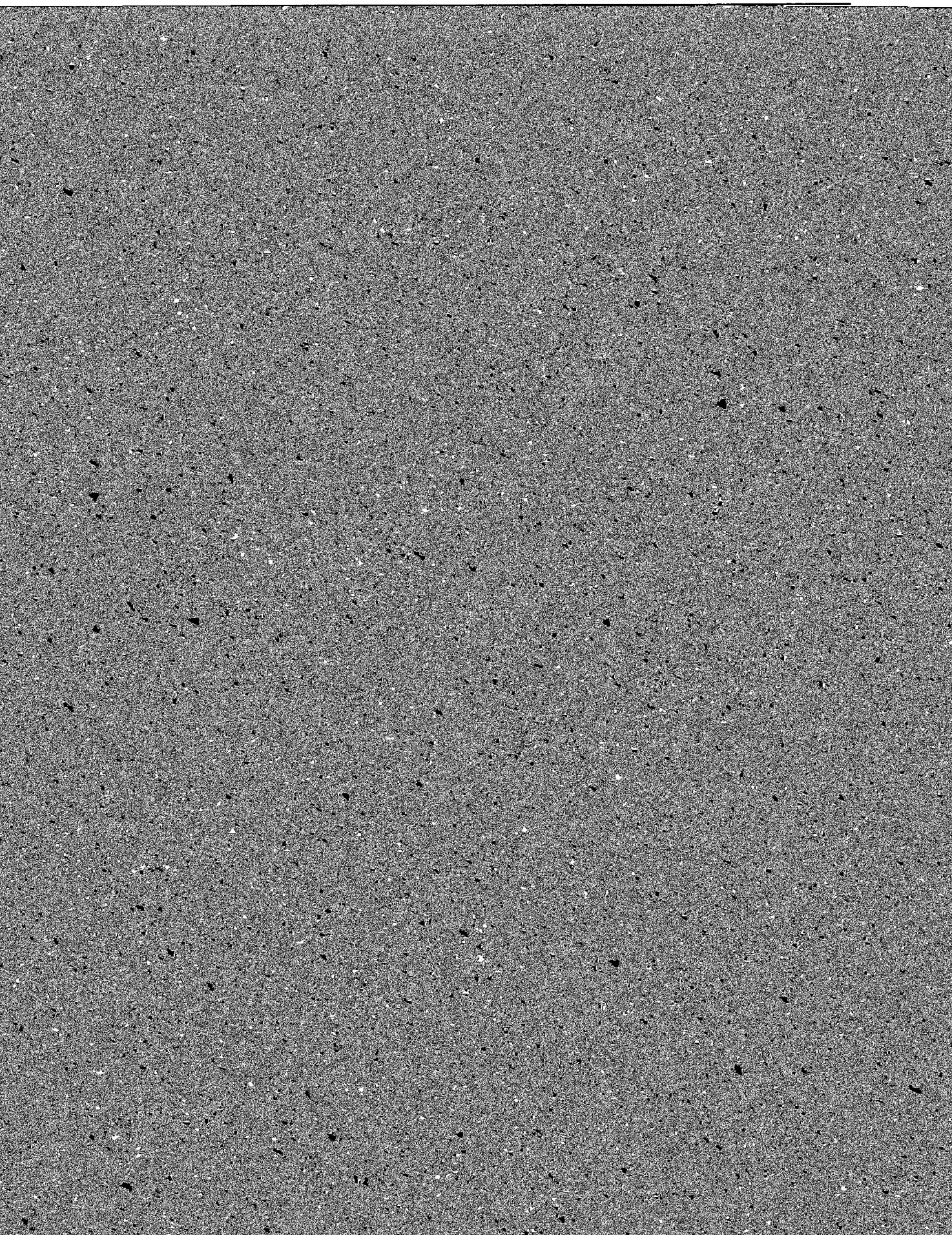
STATE		PROJECT		
Iowa		Graybill Creek		
BY	DATE	CHECKED BY	DATE	SITE NO.
Johnson/REC	10/23/93	W. Morrison	11/03/93	339-15
SUBJECT				SHEET 4 OF 18
Survey Points Plot				

BENCH MARK		
NO.	ELEV.	DESCRIPTION
TBM X	200.00	'X' Painted on Southwest corner of Bridge.



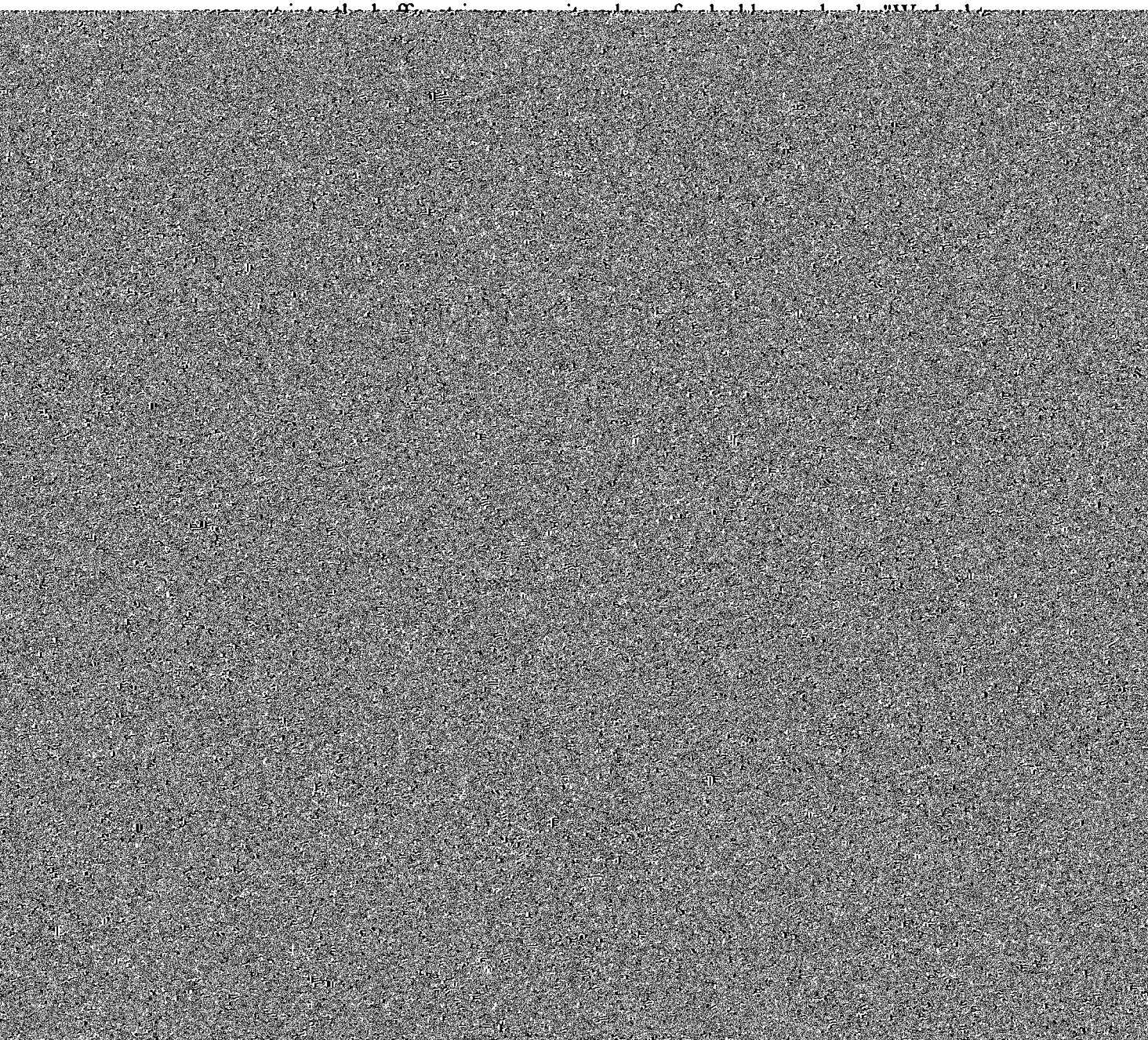


Above is the SCS plan, prepared using CAD, for the repair of flood damage on Graybill Creek. Although the amount of work required here was extensive, it cost much less than replacing the bridge.

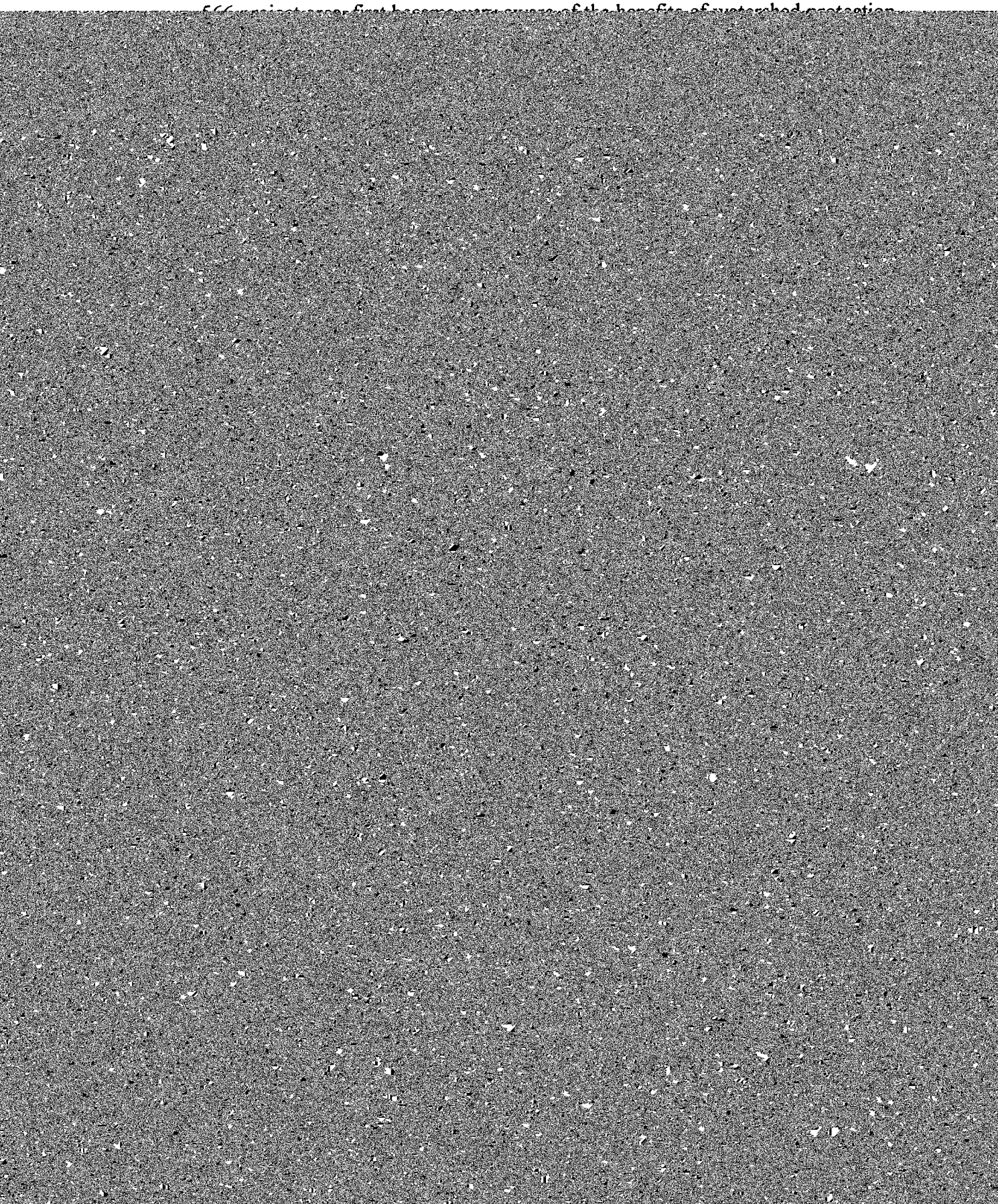


Even as SCS assisted the SAST efforts to compile data on the success or failure of soil conservation measures and small watershed projects in limiting flood damage, local anecdotal reports were positive.[256] Lou Waite, SCS Technician in Iowa, has provided some interesting examples of how SCS projects benefit specific landowners and communities.

> Harold (Shorty) Ray says that walking through the buffer strips on his Cass County farm feels like "walking on marshmallows". This is due to the soil caught and held by the grasses, and kept from washing down the hills into Indian Creek or Turkey Creek and floating away on the Nishnabotna River.
>
> His wife, Shirley, confided that at first she and her husband felt the twenty-five



The 149 landowners in Shelby County's Long Branch Watershed, another P.L.



increasingly important role of private organizations in helping achieve conservation goals. Their cooperation stemmed from shared interests in wetlands and the environment, the limited funds available to SCS, and the flexibility which private organizations possess. Many farmers were willing to offer the easement to SCS only

The Service often uses standards for construction materials set by the state highway department. Since many contractors involved in EWP work have experience in road construction or maintenance, they are already familiar with the standards. SCS responded to the shortage of quality riprap in four ways: First, employees simply

> We are developing plans to change the role of Iowa SCS from that of a provider of technical and administrative services to that of a funding agency that also provides technical and administrative support. Project sponsors will be empowered as partners, providing engineering and contracting functions. SCS will provide construction funds, engineering and contracting support, and take steps to ensure quality control. This new mode of operations should allow for more timely completion of EWP repairs, lessened impacts on other SCS program areas, and the development of a new tool for program delivery in future short-term events.[265]

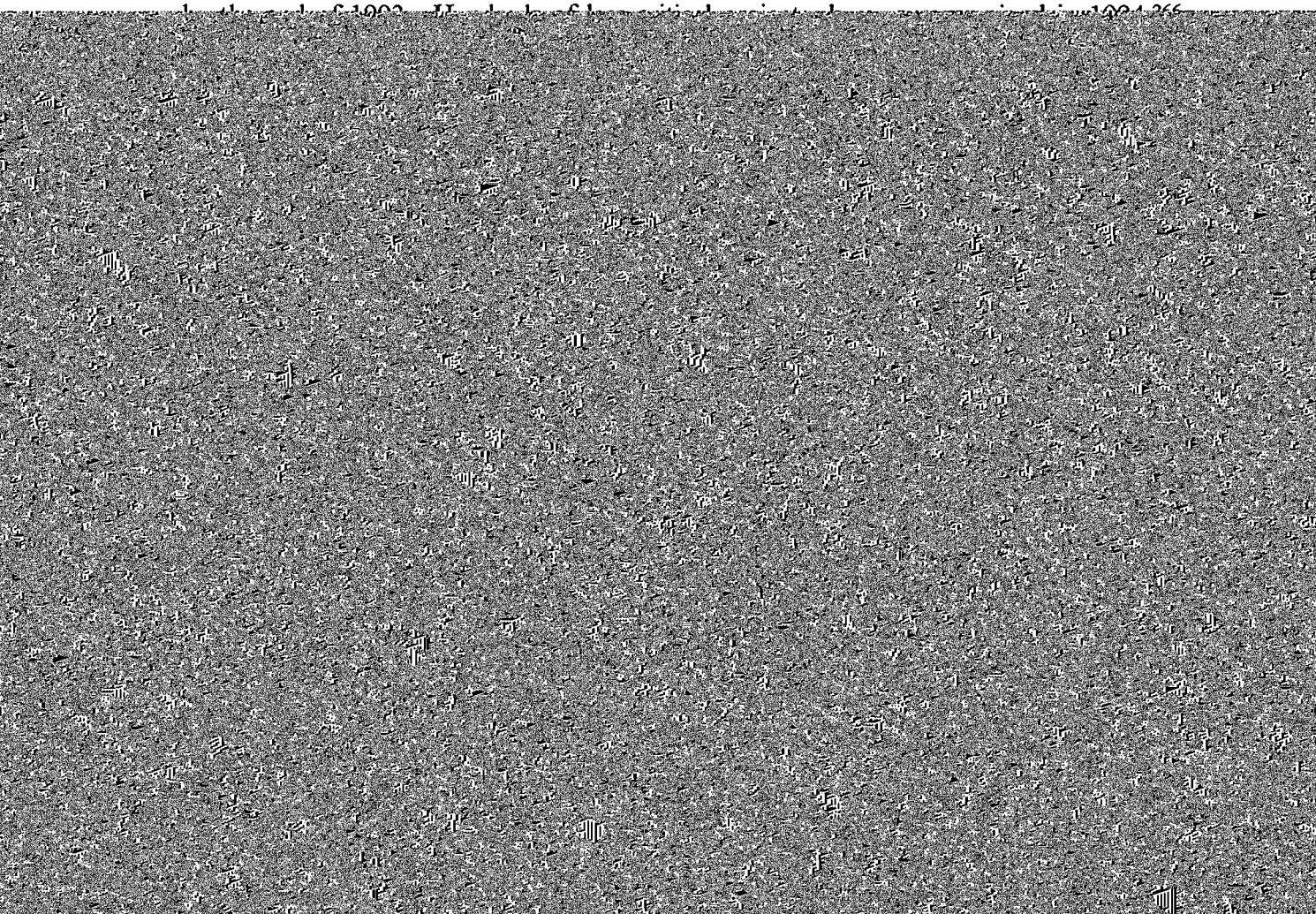
In other words, the local sponsor's cost-share would be to provide the administrative and engineering services required for the repair. The Service would then fund the actual repair work and spot-check to assure that engineering standards were maintained. The Service would take on the role of a granting agency. Iowa's EWP effort had been moving slowly in this direction as SCS staff developed confidence in local sponsors' abilities. Not all state offices in the Midwest were eager to try this approach. First, many did not feel that their workload justified the change. Second, some staff members, particularly those with engineering backgrounds, were less than enthusiastic over losing control of project designs. Their question was: What would or could SCS do if the repair was substandard or used substandard materials? Third was the issue of administrative control of funds and assurances that contracting practices would be fair. The attempt to re-invent the relationship between SCS and local sponsors showed great potential, but it will be some time before a complete evaluation can be made.

[265] "Iowa Emergency Watershed Protection (EWP) Program-July 1993 through Present," Iowa State Office, March 1994.

Kansas and Nebraska

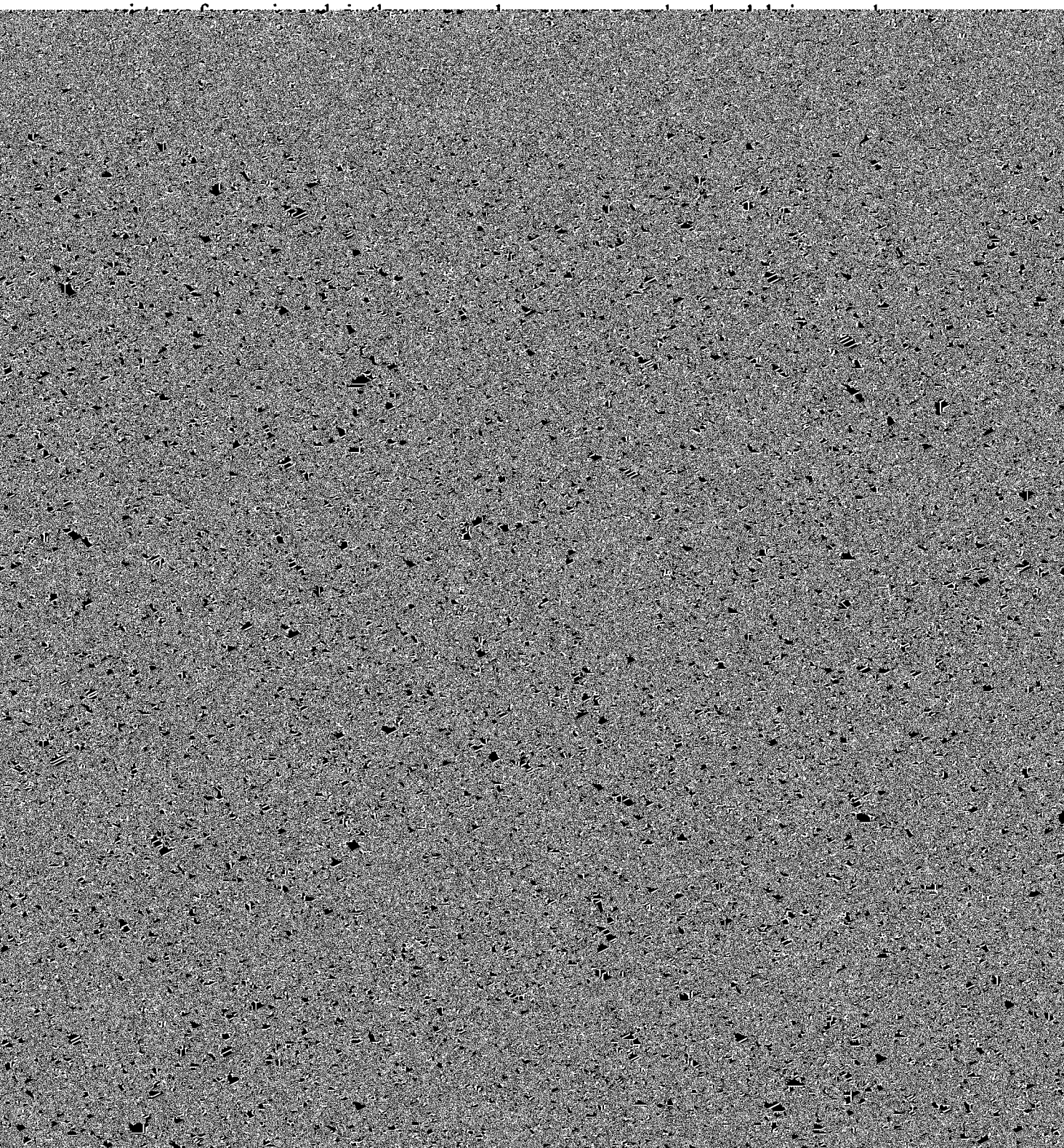
Most damage in Kansas was in the northeast quadrant of the state. The SCS estimated that about three million of the state's twenty-nine million acres of cropland required restoration work after the flood. Jim Wallace, state conservation engineer and the employee who managed most of the day-to-day flood recovery work in Kansas, stated that up to thirty thousand acres of prime farmland were washed away, severely scoured, or covered with deep sand. In response to these problems, SCS in Kansas held a sixty-day sign-up for EWP assistance beginning in August of 1993. By December, the state office in Salina had already approved 249 of over seven hundred DSR's.

The most common EWP work was removing debris from around bridges and sediment from streambeds and drains. Although these were often small projects costing less than $20,000, they provided immediate local benefits, such as protecting a bridge or county road. The most critical of the approximately eighty exigency projects focused on streams plugged with debris at bridges, caved-in banks, and eroded bridge abutments. Under these circumstances, even relatively minor rainfall would lead to more flooding and thus threaten near-by infrastructure. Kansas completed most of the exigency work



down by the Corps and the Economic Development Administration. If the Service refused to assist, there was almost no chance of federal aid.

Newspaper reports made clear that many farmers, frustrated by the pace or the uncertainty of federal assistance, intended to fund and make their own levee repairs if necessary.[268] According to EWP rules, SCS was to provide cost-sharing and technical



management. Other popular methods of protecting the soil include terraces, grassed-waterways, and trees.[271]

The Small Watershed Program (P.L. 566) has been popular in Kansas since its inception in the mid-1950's. Organizations like the State Association of Kansas Watersheds have consistently supported the Service's efforts in this area. SCS personnel credited these projects, which included measures ranging from small dams to land treatment practices, with preventing greater flood damage. Watershed work was also the focus of public affairs efforts in the Sunflower State. Over seven hundred dams have been built in Kansas since the 1954 law which authorized the program. The complete watershed projects, such as Nebo Creek, Frog Creek, Cross Creek, Irish Creek, Upper Verdigris, and White Clay-Brewery-Whiskey were all credited with reducing local flood damages by sixty-five percent or more. Many sources compared damages in 1993 to the worst previous flood, that of 1951, and emphasized that water levels rose and fell at a slower rate after the P. L. 566 work was completed.[272] For example, the Lyons Creek Joint Watershed Number Forty-one, with thirty dams protecting almost twelve thousand acres, provided about $250,000 worth of benefits in damages prevented in 1993. The Sand Creek watershed project was credited with preventing $286,000 worth of damages. A project now almost forty years old, the Switzler Creek Watershed, allowed only minor flooding in the town of Burlingame. A more recent accomplishment, the Turkey Creek project, was completed only in 1992. It covered eight thousand acres; its dams held and then slowly released waters that would have caused flooding along the creek in the past.

Directly to the north, Nebraska's disaster came from two sources: ice jams in the Platte River during the spring and heavy rainfall in the spring and summer. The floods in Nebraska began in March of 1993, earlier than almost any other place in the Midwest. Even before the rainfall of spring and summer, some farmers determined that they would be unable to plant in some areas of eastern Nebraska or that their harvests would be below average.[273] Eventually, fifty-one counties were declared disaster areas by the federal government. Most flood damage was in the southern and southeastern part of the state.

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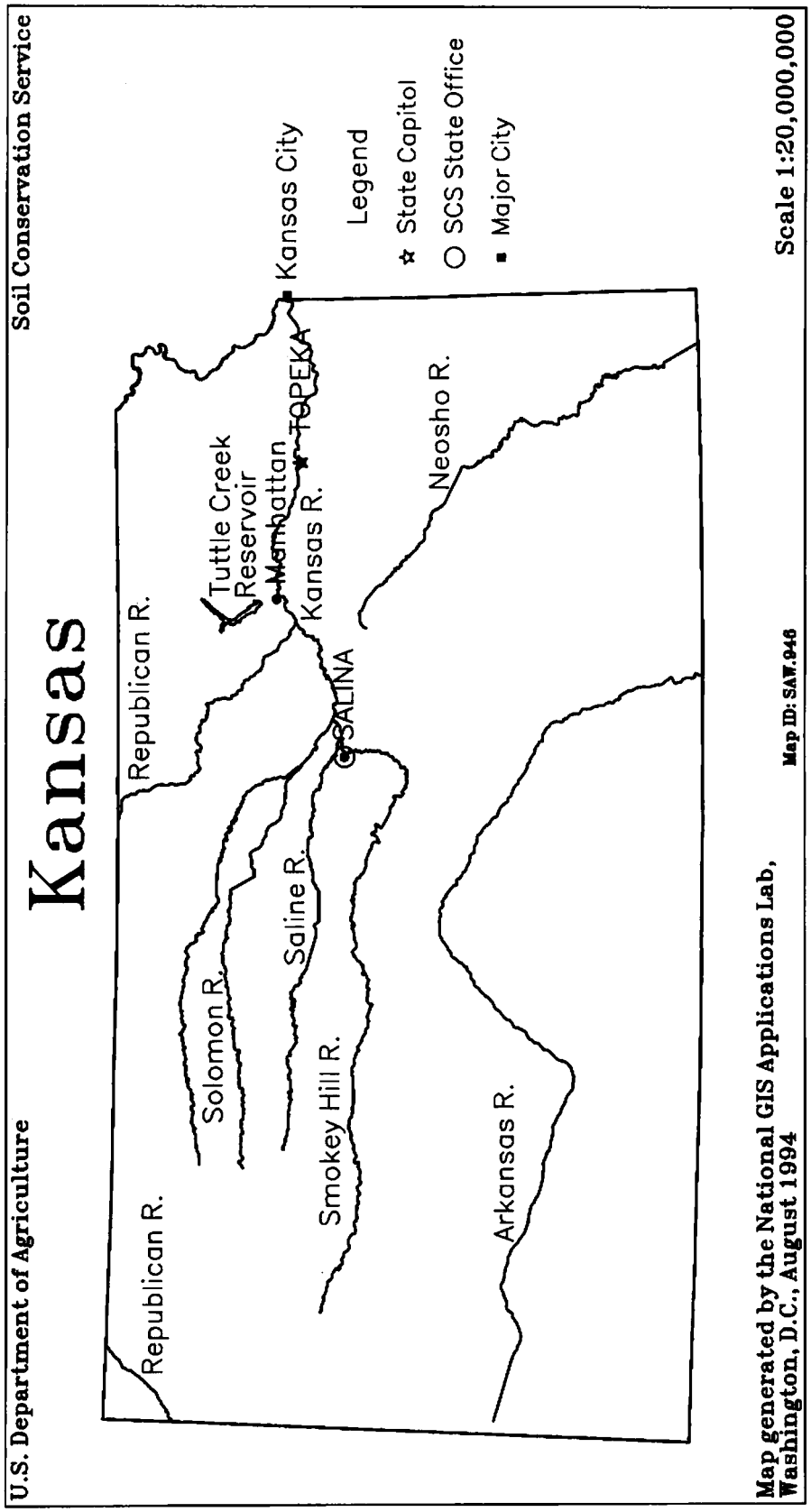
[271] See the section entitled "Flood Control and Floodplain Management Debates" for information on how the Interagency and SAST reports evaluated the flood control or prevention values of various SCS programs.

[272] Tim Christian, SCS Public Affairs Specialist, "Watersheds Save Property, Money," *Abilene Reflector-Chronicle*, April 29, 1994.

[273] James Ivey, "Farmers May See Tax Relief if Floods Prevent Crops," *Omaha World-Herald*, March 27, 1993.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Major City
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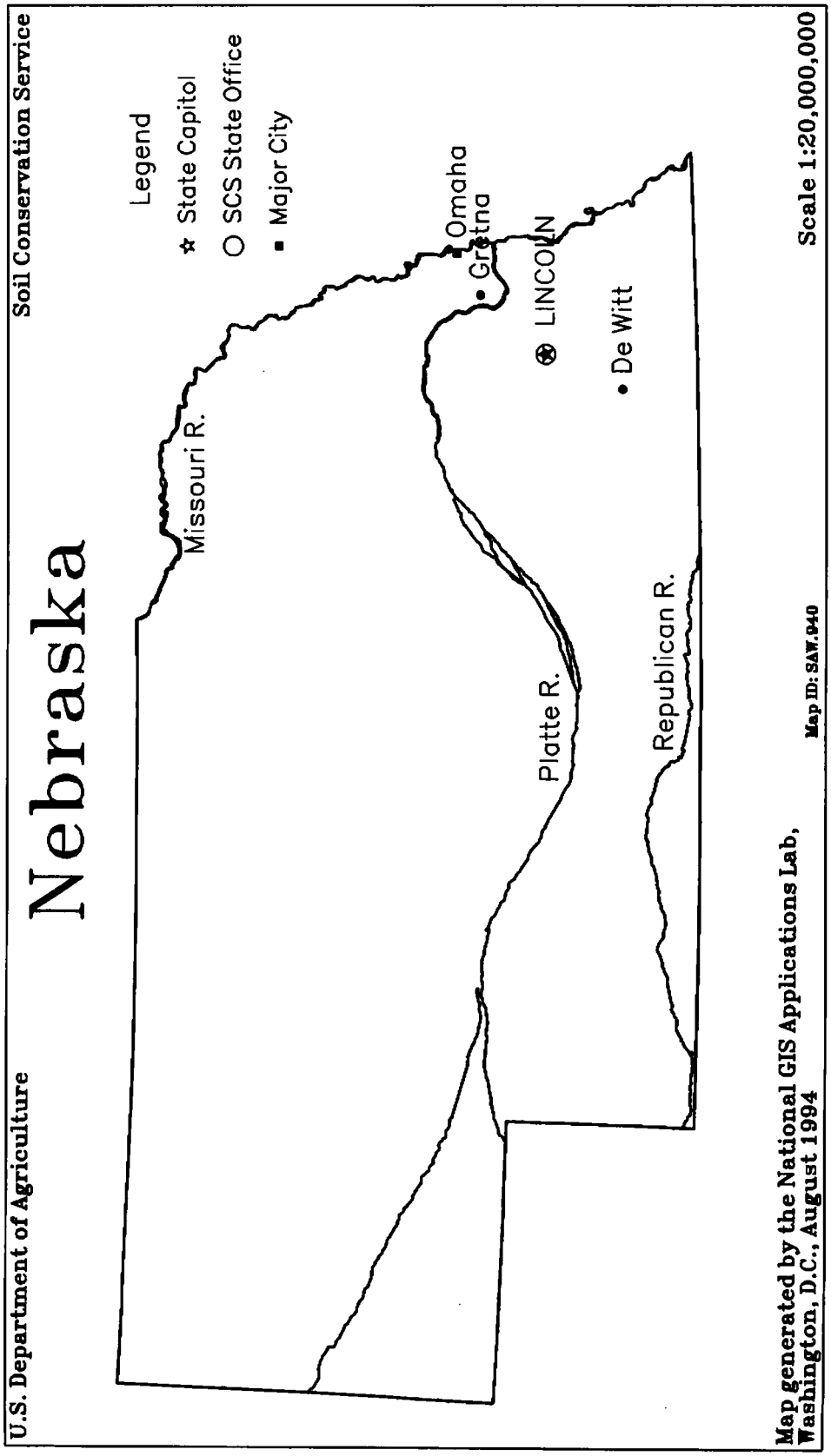
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SCS State Office
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Omaha
Gretna
LINCOLN
De Witt
Platte R.
Republican R.
U.S. Department of Agriculture
Map generated by the National GIS Applications Lab,
Washington, D.C., August 1994
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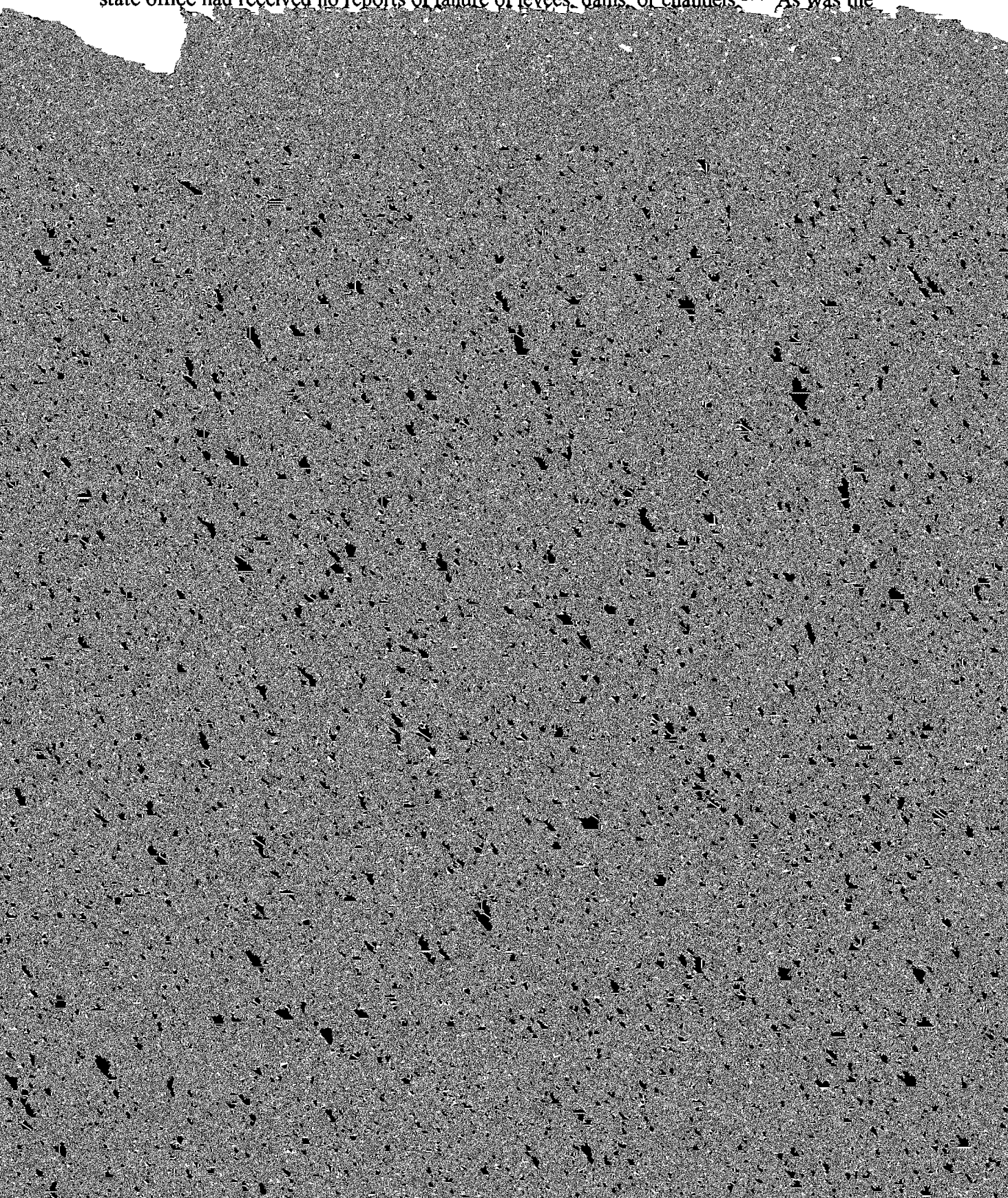
Overall, the extent of damage which was eligible for EWP assistance in Nebraska during the summer of 1993 was less than in states to the south and east. Even in late July, the state office had received no reports of failure of levees, dams, or channels.[274] As was the

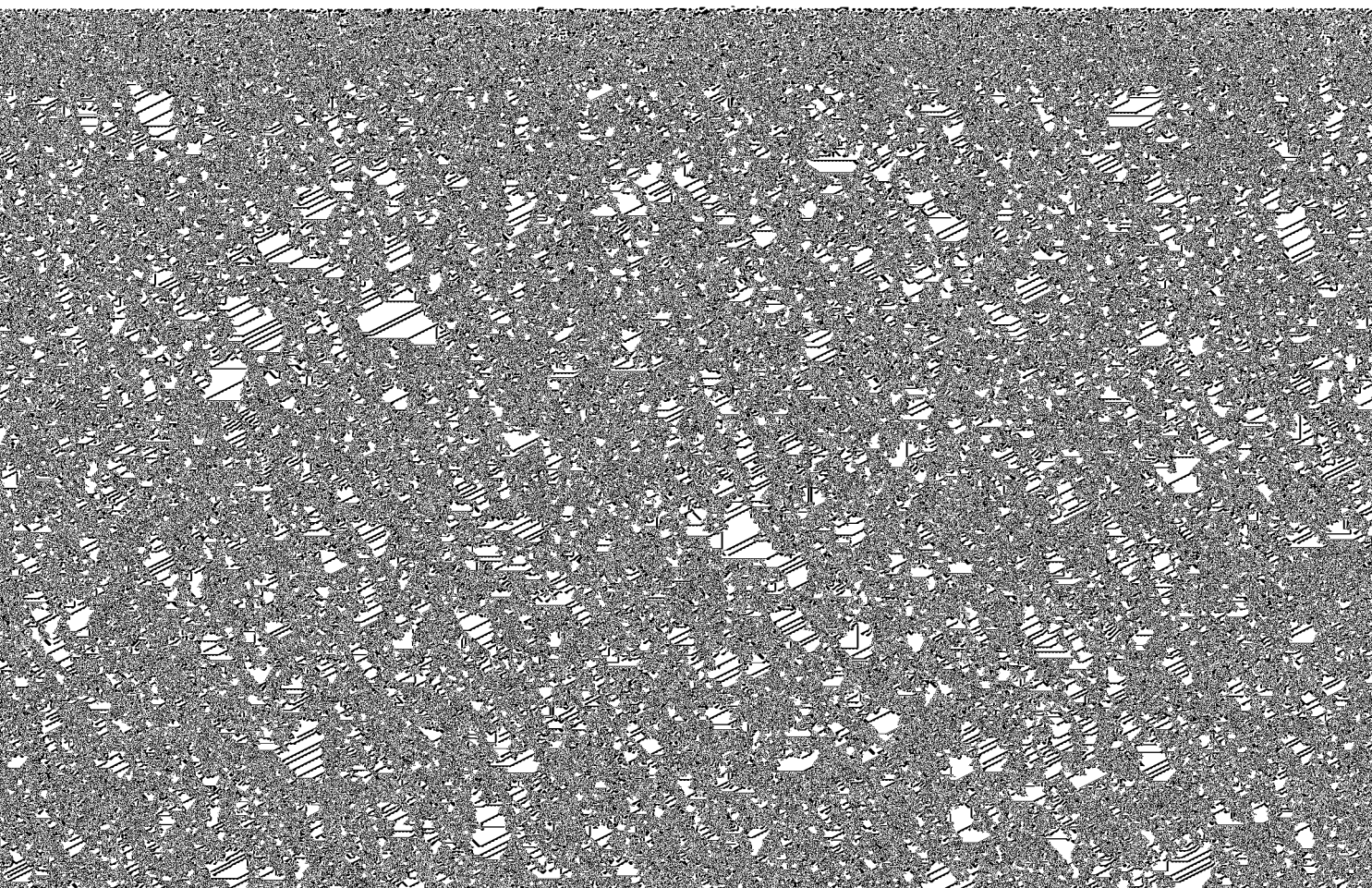


As was the case in other states, complaints about federal responsiveness to levee repair requests in Nebraska were frequent. Also, misunderstandings over the change in Corps policy in 1986 led to a great deal of uncertainty over responsibility for repairs both among the public and in government. One particularly sensitive point was that when any levee was repaired by a federal agency other than the Corps, that entity became

Missouri

Missouri was one of the states hardest hit by the floods of 1993. Except for a few counties in the Ozark country along the southern border with Arkansas, President Clinton declared the entire state a disaster area. As reported in August of 1993, over three thousand businesses were economically damaged by the flood, twenty-five thousand people were laid off, and three thousand homes were destroyed. Damage to an estimated 1.3 million acres of cropland was expected to have ripple effects on the state's economy through the industrial and transportation sectors, possibly resulting in losses of half a billion dollars and seven thousand jobs.[280] As the water slowly receded in the fall, the SCS added its own statistics to illustrate the devastation in their state:

- 3.1 million acres flooded
- 1,700 miles of ditches blocked with debris
- $250 million in crop losses
- 60 percent of the cropland (455,000 acres) in the Missouri River floodplain damaged by sand deposits and scouring
- 59,000 acres covered with two feet or more of sand
- 465 breaches in Missouri River levees (along 498 miles of river).[281]




U.S. Department of Agriculture
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Fayette
Kansas City
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Warrensburg
Saint Louis
Washington
JEFFERSON CITY
Black R.
Cape Girardeau
Map generated by the National GIS Applications Lab, Washington, D.C., August 1994
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administrative assistant, and two clerks. On September 1, 1993, a short EWP procedural handbook was published in order to guide SCS employees on administrative chores such as overtime and travel expenses, mobile telephone numbers for key staff, and duties at the state and local levels.

Normally, SCS activities in Missouri are divided into seven areas, each area encompassing ten to twenty counties. The state office set up seven Emergency Project Offices, most of which were in the same location as the area offices. In order to distribute more evenly the workload among areas and place offices closest to the greatest need for assistance, the area boundaries were modified. SCS combined the far southeast area, which suffered relatively little flood damage, with one to the north while parts of four areas were combined around an Emergency Project Office in the central part of the state. Each office had a staff which included a lead engineer who also served as the office manager, another engineer, a lead survey technician, a lead inspector, and a clerk. They could call upon specialists such as biologists, soil scientists, cultural resource